CORVAIR

ENGINE & TRANSAXLE PARTS

OTTO PARTS

DEDICATED TO THE
IMPROVEMENT, PRESERVATION & PERFORMANCE
OF THE CORVAIR

9659 REMER STREET
SOUTH EL MONTE, CALIF. 91733
ORDER DESK PHONE (213) 579-5875

$3.00

Sales Policy

PRICING:
All prices are F.O.B. South El Monte. Prices and specifications are subject to change without notice.

TERMS:
Full payment including shipping cost must accompany order. Send money order or certified check. Personal checks will delay orders 3-4 weeks while check is cleared through our bank. There is an additional $3.00 handling charge on orders less than $15.00. You can also charge your mail order using your VISA, Bank-Americard, or Mastercharge card. Simply send in your card number and expiration date.

SHIPMENTS:
All orders are shipped by United Parcel Service. If you specify another carrier, add $5.00 for special handling to the rates for that carrier. Weights shown in catalog are shipping weights, which are to be used in figuring shipping cost from schedule provided. All items shipped will be insured against damage. Intransit damage claims should be made against the carrier. Replacement parts may be ordered from us. Most orders are shipped within 24 hours of receipt of order.

PHONE ORDERS:
We can take your rush order by phone. Payment can be taked by phone by using your Bank-Americard, VISA, or Mastercharge number. We will not accept collect calls.

CATALOGS & DECALS:
If your catalog is out of date, you may obtain a new catalog at no charge by requesting a new catalog along with your order. We also have *OTTO PARTS* and TRANSVAIR decals which we will send to you if you request them along with your order.

CREDITS AND EXCHANGES:
A 15% handling charge will be made if the fault is not ours. A request for return of any merchandise must be made within 10 days after your receipt of order. Anything after that is invalid. Customer must assume shipping charges on all merchandise on exchanges.

RETURN OF MERCHANDISE:
No merchandise should be returned without first securing factory authorization. All return shipments must be sent freight prepaid insured. We will not accept collect shipments. Be sure to include complete information on the problem encountered plus invoice number, name, address, and phone number. After receiving your authorization, you must ship the goods within 10 days. No returns of electrical parts. No claims will be considered without a copy of your invoice.

WARRANTY:
OTTO PARTS warrants that all parts supplied by us will perform as specified when installed properly and instructions are carefully followed. *OTTO PARTS* will rework or replace at our discretion any product determined by us to be faulty or defective in material or workmanship. The full extent of this warranty is the product supplied by *OTTO PARTS* and does not include any other loss, failure, or related damage. *OTTO PARTS* is not liable for labor costs incurred to replace defective parts. If you suspect there is something amiss with an *OTTO PARTS* product, contact us BEFORE tampering with it. Tampering with or modifying an *OTTO PARTS* product will void the warranty.

CORE AND TOOL DEPOSIT POLICY:
All deposits are subject to a 45 day term from date shipped to customer. Any deposit not claimed within 45 days will be considered a buy-back at one-half original deposit.

CORE PURCHASE:
We will buy rebuildable cores. If you have reconditionable idler pulleys, cylinders, camshafts, flywheels, pressure plates or "140" cylinder heads, write us a list of the specific parts you have and we'll discuss prices. NEVER ship anything without first getting an OK from us!

OTTO PARTS

CORVAIR OWNERS CLUB:
There is an active growing Corvair owners club called CORSA (Corvair Society of America). This club was formed in 1969 by and for those who appreciate the Corvair. This organization has many interesting activities and the monthly publication is an endless source of information. For more information write to:

CORSA Inc.
P.O. BOX 2488
PENSCOLA, FLORIDA 32503

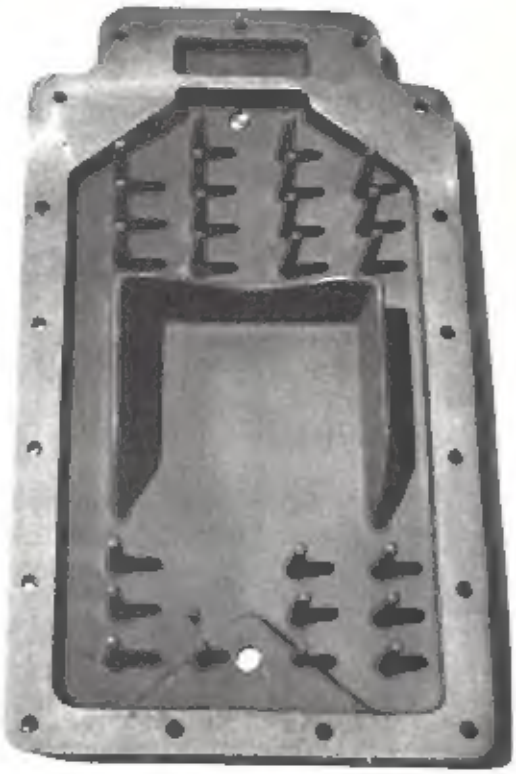
Introduction

OTTO PARTS. Corvair Hi-Performance equipment is designed for the enthusiast who demands better performance and extended reliability from this unique engine.

Each item has been carefully engineered and manufactured from the best materials available.

While a policy to provide the highest quality product DOES NOT often yield the lowest price, it DOES always yield a more satisfied customer over a greater period of time. Fully aware that many persons always purchase lesser priced merchandise, we feel that this sacrifice is well justified to provide a superior product for those who can only be satisfied with a quality product. We will continue to be as competitive as quality and your best interests will permit.

ULTRA-COOLER OIL PAN
Fits all Corvairs



Scientific fin placement puts air flow to work, reducing oil temperature as much as 50°F when used with the matching rocker-arm cover set. Full 314 square inch cooling area (170% of stock area) is aided by sand blasted and black anodized finish to radiate maximum heat into the air flow. Baffle construction permits stock pick-up location, prevents pump starvation during hard cornering, and supplies coolest oil to pump. The three high baffles and 24 posts extend into the hottest layer of the oil, capturing heat and conducting it directly to the cooled exterior surface. The pan adds only one pint of oil capacity to the engine, to make an even 5 quarts, keeping the cost of changing oil to a minimum. To keep ground clearance to a reasonable figure, the pan is a mere 3/4 inch deeper than the stock pan, including the fins. At the back of the pan a 1/4" N.P.T. hole is provided with flush fitting plug installed, for quick installation of an oil temperature sending unit or dry sump attachment.

This rigid cast aluminum pan also provides a girdling effect to the split crankcase halves to reduce movement at high R.P.M. that can cause bearing interference. A must for all turbo charged and modified Corvairs, a remarkable improvement on any Corvair.

Oil pan kit includes: 1 oil pan, 1 set heat treated, cad plated, self locking, flange headed bolts, 1 drain plug w/gasket, 1 temperature boss plug, 1 **OTTO PARTS** Gasket for Cast Aluminum Pan. We recommend use of **OTTO PARTS** High Performance Oil Pick-Up, Order #OP-126. Use of these parts insure maximum oil cooling and long lasting seal.

Order #OS-101
Also available with Polished Fins.

The above pan is available with an additional oil temperature sending unit boss located inside the oil pick-up baffle, to monitor temperature of oil at the pick up point.
This location is also less prone to dragging than the rear location.

Order #OS-101-A

OTTO PARTS

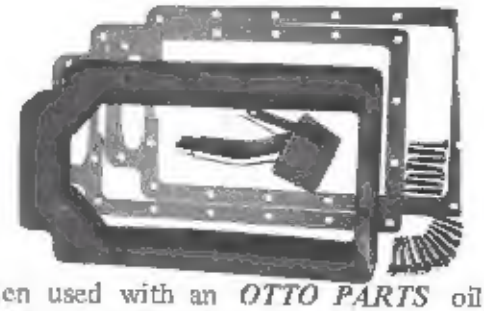
OIL PAN, BAFFLE SPACER KIT

For Road Racing & Oval Track Engines

This Baffle Spacer was developed by *OTTO PARTS* to eliminate oil loss from the sump area. When the Corvair engine is subjected to sustained high "G" forces or extreme chassis angles, the oil escapes to the cylinder head, starving the oil pick-up.

The baffle extends out over the pan and the parabolic ramp diverts fast moving oil back into the pan area. The spacer with gaskets is ¼" thick putting more of the oil below the gasket surface of the engine, where it can be effectively controlled by the baffle ramps. For best oil control we recommend you recalibrate your dip stick to the same oil volume you had *without* the baffle spacer. However, if you fill to the original full mark on the stick it will add (1) quart.

The baffle spacer also contributes to additional oil cooling. The parabolic shroud exposes 54 square inches of heat conductive aluminum to the hotest oil. Unquestionably, the ultimate solution to oil washout and pump starvation. This design will work the best



when used with an *OTTO PARTS* oil pan which has baffles to keep oil in the pick-up area. In order to assure the best results, this baffle spacer is sold with Hi-Performance oil pick-up. You must specify the make of pan you will use, or provide measurements from gasket surface to the highest object in pick-up area.

1. Baffle Spacer (Black Anodized)
2. Hi-Performance Oil Pick-up
3. Two Gaskets, for Cast Aluminum Covers
4. Heat Treated, Self Locking Bolts

Order #BS-133

OIL PICK-UP.....Hi-Performance

This practical and effective oil pick-up is available for both the *OTTO PARTS* Pan and all Brand 'X' Pans.

This more-functional pick-up is 5/8" closer to the pan-bottom when fitted to an *OTTO PARTS* Pan and considerably more on deeper Pans.

If you have a Brand 'X' Pan (and specify the brand) we adapt the pick-up tube to that pan to obtain the benefits below.

As the cooling effect of outside air affects oil for only a limited distance, the coolest oil is obviously within the first 3/8" from the Pan bottom.

The *OTTO PARTS* Hi-Performance Oil Pick-up promotes a more effective oil turnover in the pan because the pick-up is closer to the pan bottom. As a result, oil cooling is increased! The relocated pick-up is even more important for deep pans, because the stock pick-up does not enhance oil turnover.

All models of the pick-up maintain this critical spacing. The configuration of the head minimizes wash-out of the oil on high "G" turns. A rigid support strut fastens directly to the pick-up head, eliminating any fatigue which might otherwise result from vibration of an unsupported structure. This strut also accurately positions the head relative to the pan bottom.

OTTO PARTS PAN
Order #OP-126

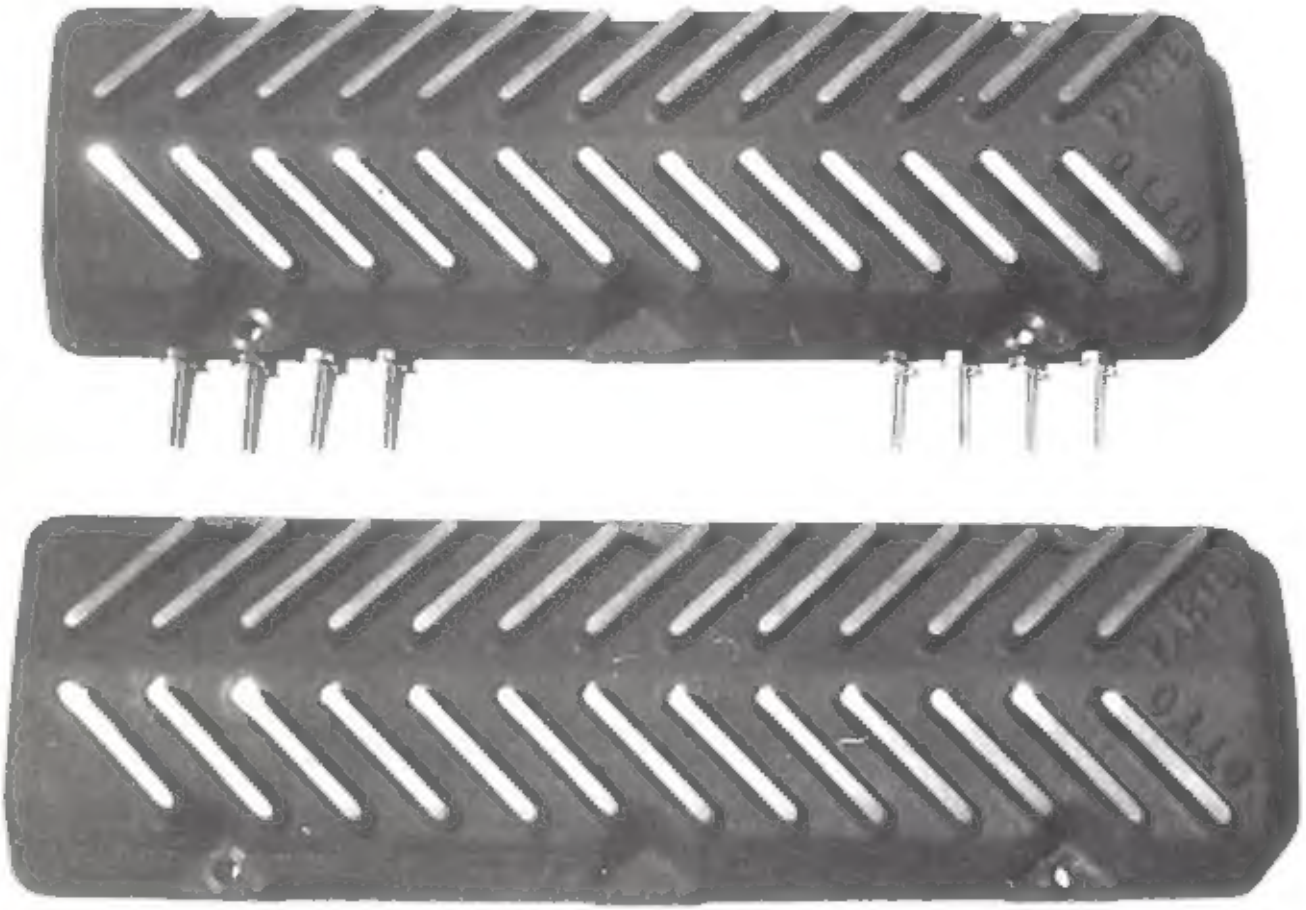
IECO or EELCO 2 qt. Pan
Order #OP-127

No name 2 qt. Pan (as sold by Warshawsky, Whitney and others)
Order #OP-128

Note: You must, either specify brand of Pan, or measure from gasket surface to pan floor or highest point in pick-up area and submit measurement.

OTTO PARTS

ULTRA-COOLER
Rocker Arm Covers



These covers are of the same unique fin design as the oil pan. They provide 316 square inches of sand blasted, black anodized cooling surface, and radiate maximum heat from the cylinder heads, where some 90% of the engine heat is created. These covers will reduce head temperature and can reduce detonation caused by heat.

The hottest oil leaves the cylinder head and returns to the oil pan where your Ultra-Cooler Oil Pan will minimize oil temperature to give optimum engine life.

The Ultra-Cooler Oil Pan and Rocker Covers are unequaled in effectively reducing oil temperature as much as 50°.

This combination, the Ultra-Cooler Oil Pan and Valve Covers are all that is generally required to keep engine and oil temperatures at a reasonable figure.

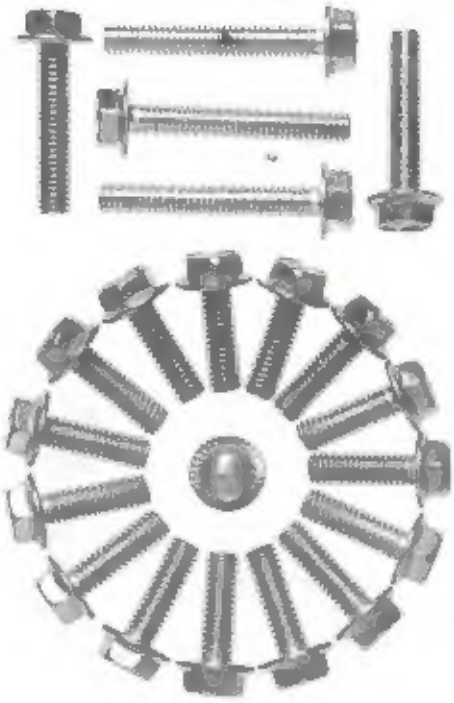
Ultra-Cooler Rocker Arm Cover Set includes: two covers, one set heat treated, cad plated, self locking, flange head bolts, two **OTTO PARTS** Gaskets for aluminum covers.

Four hole bolt pattern
Order #RC-102-4

Six hole bolt pattern
Order #RC-102-6

Also Available with Polished Fins.

SHAKE PROOF BOLT KIT
Crankcase Cover & Oil Filter Adaptor



The most overlooked oil leak problem on the Corvair Engine is around the Crankcase Cover.

The reason for the Cover not holding a seal is inadequate bolts that just don't hold. The Stock Bolts used for the Cover are soft and have a small bearing surface (no flange) with no provision for locking. They will frequently loosen even when torqued to the factory specs.

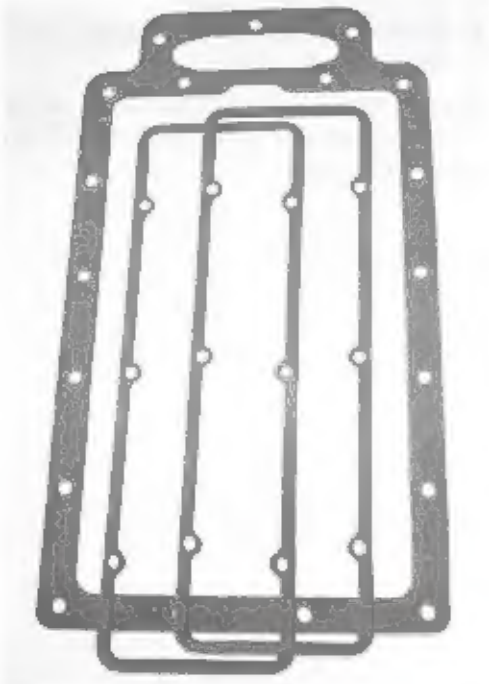
Both Crankcase Cover and Oil Filter Adaptor are subject to stress and vibration from Blower Fan, Alternator and Idler Pulley, requiring them to be held securely with quality Shake-proof Bolts.

You can prevent these failures with the **OTTO PARTS** Bolt Kit that has; Flanged Shake Proof Head design and are heat treated.

Tested and proven effective Kit contents: (1) 21 Bolts to install Crankcase Cover and Oil Filter Adaptor. (2) Instruction Sheet.

Order #BK-159
Shipping Wt. 2 lbs.

OIL PAN & ROCKER COVER GASKETS



A gasket material for use with **ALL** cast aluminum covers. Neoprene and cork type gaskets are for use with sheet metal type covers and are not compatible with cast covers. **OTTO PARTS** gaskets' are 1/32" thick, they will not extrude out the sides under hi-pressure. They do not tend to harden from heat and start leaking; provide better heat conductivity from engine to cover, and in general provide a better, longer lasting seal. Order extra gaskets for your spare parts stock, so you will have some handy when you adjust your tappets or clean out your oil pan.

Order
#CG-111 For aluminum covers
#CG-111-A Fel Pro gaskets for stock covers

#PG-111 For aluminum pan
#PG-111-A Fel Pro gaskets for stock pan
#CG111-5 Five pair for aluminum covers
#PG-111-3 set of three for aluminum pan

PRO-FLOW OIL PUMP KIT

The stock oil pump in the Corvair engine is marginal in volume under the best conditions. As clearances increase through normal use and more oil is passed at each lubricating point, the stock pump is unable to keep up with the oil supply required. The results are reduced lubrication in several critical points in your engine. The 4th main bearing and rod bearings #5 & 6 are the first to fall short in required volume. In even a new engine when at full operating temperatures, the stock pump cannot properly lubricate the valve gear at engine speeds below approximately 2,000 RPM. This condition contributes to increased valve guide wear and rocker arm failure.

The Pro-Flow Oil Pump Kit has 50% longer gears which provides 133% of stock pump output. Special quality features are the gear cover that provides bearing bores to locate the gear shafts on the outboard end to eliminate side scrub between gear and housing. The spacer and the bearing cover are machined from solid bar stock not cast aluminum. Both of these features are unique to the **OTTO PARTS** Pump and not offered with other pumps.

The improved oil flow will help keep engine temperatures down and provide adequate lubrication under all conditions. For extended engine life and reliability this Oil Pump should be a top priority for all Corvair engines.

Pro-Flow Kit Contents:

1. (One) gold anodized gear spacer.
2. (One) gear set with hardened driveshaft.
3. (Six) 1/4-20x1" grade 5 self locking bolts.
4. (One) length of PR-1 Plasti-gage.
5. (Four) gaskets .003", .005", & .008" thick.
6. (Two) 3/32"x5/8" "Rol-pins" for doweling the spacer to the accessory housing.
7. New idler gear shaft to match the longer gear.
8. Illustrated instruction.
9. Special driving gear and shaft assembly.
10. Bearing cap, pump cover.

We urge you to compare quality and kit contents before buying any other Corvair Oil Pump.

Order #PF-108

CAMS FOR CORVAIRS

The cam is the heart of your engine. Why settle for the compromise performance of a stock cam when you can have a cam which will perfectly compliment your driving needs and modifications *(if any)* you have made to your engine? Why let your car's performance depend on your local cam grinder's luck or black magic? With *OTTO PARTS*, you benefit from the latest technology of computer developed cam profiles matched to best compliment the air flow balance in the Corvair cylinder head. The result is a broad power band for better overall performance.

With our special series of profiles, *(for normally aspirated engines* **OT-10** *thru* **OT-50** *and for Turbos* **TB-10** *thru* **TB-50***)* there is an *OTTO PARTS* camshaft for your performance objective, be it the ideal street engine or all out competition.

The Cam profile determines the performance characteristics. This cannot be determined by advertized specs or Cam checking specs.

A Cam should be chosen based on known performance from a given profile combination. To get the Cam that is ideal for your objectives why not tell us what you want in performance and we will select the Cam that provides the results you want. Just fill out the Cam selection form on the back of our order blank and send it along with your order.

Series numbers 10 thru 30 are available in regrinds from our stock, use order **#RG-115.** Numbers 40 & 50 are ground on billets only, order **#PB-116.**

TB-30 and OT-30

All around performance with power band starting between 2,000 and 2,500 R.P.M. Big on mid power. The top end will depend on which heads are used and how well they are prepared. A good choice for prodified autocross cars. The ideal Cam for all around dune buggies with "140" Engines.

SERIES 40 and 50

These are all out competition grinds supplied on billets only. Consult with us on other engine and head modicifications and type of competition for selection of one of these Cams.

PERFORMANCE OUTLINE
TB-10 and OT-10

This is the ideal replacement for the Stock Cam where both performance and economy are important. Results are broader powerband and better driveability. It works great even with a powerguide and good pulling power for heavy loads as with the truck.

TB-20 and OT-20

A good choice for the enthusiast who wants more performance but does not want to give up good driveability for the street. Little change in low end performance, big improvement in midrange power.

Order #RG115	Regrind Camshaft (send in your old cam w/order; sold exchange only)
Order #PB116	Proforal Billet Camshaft
Order #VL120	12 Pair Valve Locks
Order #TL-122	12 Pair Heat Treated Valve Locks

HYDRAULIC TAPPETS

These are an excellent precision tappet with a metering rate that is compatible to the Corvair. Any new or reground cam must be mated to new tappets or a cam lobe failure is almost certain.

We have had near perfect performance with this Sig Erson tappet since 1973. They are a competitively priced quality part.

Order #HT-117

OTTO PARTS

STOCK CAM GEAR

For reliable service a used cam gear should not be reinstalled. We have seen many failures due to this practice. The gear is secured to the cam only by the interference fit. It has taken a set to the first shaft and is not likely to hold if removed and reinstalled. See also the article on crank hubs, our P/N SH-129.

Many new gear failures are due to improper installation of the cam gear. If you are ordering a cam you can have the gear properly installed here at **OTTO PARTS.**

Order #NG-125

FAILSAFE CAM GEAR

When higher than stock lift cams are used the chance of the cam gear working loose from the cam is greatly increased. Set screws in the cam and gear have been the standard approach to this problem in the past. The drawback to this is that the gear is not easily replaced later due to the machining of the hub. It is also a costly method that requires the use of a milling machine.

OTTO PARTS has developed a Failsafe cam gear that does not damage the cam hub and will hold the gear securely even with strong dual springs and .550" lift. This unique shrink ring method has been sold on cams to racers and other high lift cam customers since 1975 without a failure.

Actual reliability of the Failsafe cam gear bears directly on how effectively the installation is executed. Installed in our shop the gear is guaranteed not to slip on the cam, except in the event of mechanical interference of the cam or related components. When customer installed there is no guarantee, the work is done at customers own risk.

All cams with .450" lift or more should have this failsafe gear.

Order #FS-126

HEAVY DUTY TAILORED PUSH RODS

One of the most neglected details in engine rebuilding is proper pushrod length. We find that most people pass over this important adjustment because of the time consuming complexity and special tool requirement of determining the correct length to establish proper rocker arm geometry

The most important requirement for a pushrod is that it is stiff enough to open the valve at the cam lift rate without deflecting and therefore delaying effective valve opening. The stock pushrod does not meet this requirement even with a stock cam. The **OTTO PARTS** Pushrods are three times stiffer than stock pushrods by actual compression test

OTTO PARTS can supply corrected pushrod lengths if you supply amount milled from head and cam lift. Also note if the tappets you are using are a different length than stock

You will improve your performance, valve guide life, rocker arm wear, and rehability with **OTTO PARTS** heavy duty tailored pushrods

Order #PR-162

Available in; std minus .020, 040, .060, 080, 100

MATED ROCKER ARM SETS

When rebuilding your engine the rocker arms should be inspected for valve stem deformation in the toe of the rocker This condition will cause excessive valve guide wear and rocker noise The ball seat should also be inspected for wear, evidence is thinner metal in the slot area. Any ball seat that has score lines, galling evidence or bluing of the metal should be discarded. Cracks in the rocker normally start around the rocker stud slot

The common problem with new rockers is that they frequently fail to seat to the ball Those that do seat dissipate a good deal of metal into the oil during this process. **OTTO PARTS** premates the ball to the rocker for quick reliable breakin. TRW rocker arms are used.

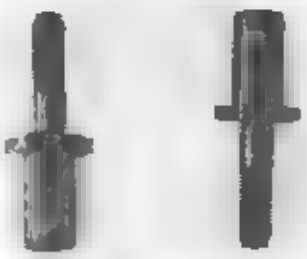
Includes: 12 rockers, balls and nuts

Order #RA 163

ROCKER ARM STUDS

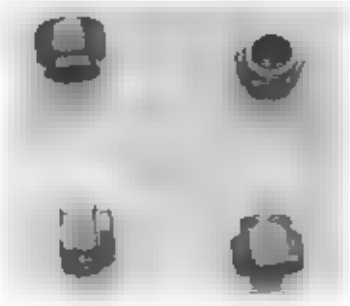
This part is subject to fatigue and difficult to evaluate for reuse. A magnetic partical inspection will reveal any parts that have surface fractures, but it will not determine the fatigue life of the part Considering the cost of inspection versus replacement cost, replacing the rocker stud is the safe choice for a reliable engine

Order #AS-150-A each
Order #AS-150-B set of 12



FRICTION NUTS, VALVE ADJUSTING

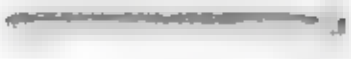
These nuts must be tight to the stud if it is going to hold
Order #FN-151 set of 6



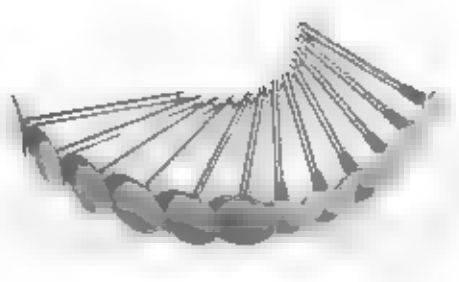
PUSH ROD TUBES

Any bent or deformed tube should be replaced Inspect carefully the condition of the O-ring grooves Deformed or scored grooves can lead to oil leaks

Order #RT 158



ENGINE VALVES



Order
#IV-177
140 Intake Valves
#EV-178
140 Exhaust Valves
#IV-179
110 & all early Intake Valves
#EV180
110 & all early Exhaust Valves
#TE 181
Turbo Exhaust Valves

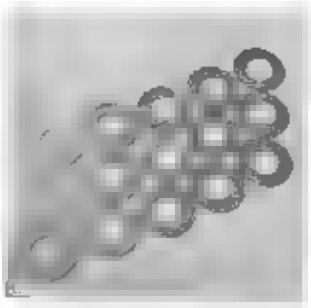
Proper inspection is very important in determining whether or not to reuse the valves. While head land and keeper groove condition are important, the stem diameter is often overlooked Bear in mind that a close stem to guide fit are essential for a long lasting valve to seat seal. A loose guide to stem fit lets the valve scrub into the seat each time it closes and wears out both valve and seat prematurely

The standards we use at **OTTO PARTS** are, with a complete rebuild for long service life the minimum stem diameter, intake and exhaust, should be no less than .340''' For a valve guide and grind only with a complete rebuild to follow later, the minimum should be held to .340''. Be sure to mike along the wear area in two planes to find the point of greatest wear. If your valves are under these specs replace them It may seem expensive now but it is cheap insurance in the long run

Our primary stock is TRW valves, when this is not available we will send Sealed Power Both are excellent quality

VALVE SPRING SHIMS

Proper spring height should be set when assembling your heads to insure proper performance and related parts life. Set a stock or modified engine. This important adjustment requires the proper shims Most shims available do not protect the head from being gouged by the valve spring damper, these custom made shims do They are ideal for use with stock or *OTTO PARTS* valve guides Stock shims will not pass over headed *OTTO PARTS* valve guides. Be sure your heads are assembled with the right valve spring shims Order some today

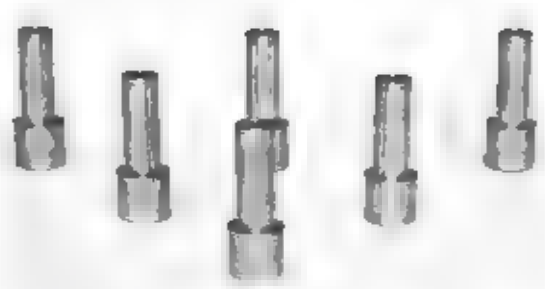


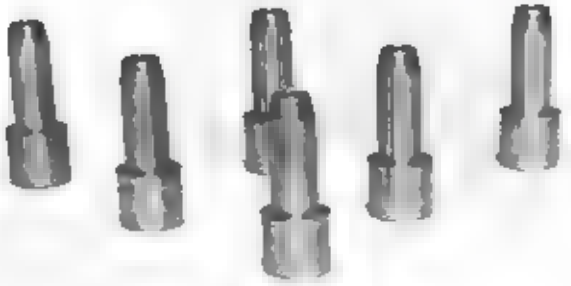
Order #SS-160

For oversize valve springs
Order #SS 160 OS

OTTO PARTS

VALVE GUIDES, ALUMINUM BRONZE





The unique **OTTO PARTS** valve guides are made from aluminum silicon bronze. The exclusive head design and the material provide maximum stability and heat dissipation, for best valve stem control

Manufactured to precision tolerances for easy installation and close stem to guide fit The intake guides have a tapered "flow cone" design on the port end of the guide to promote better flow around the valve and stem.

Many times replacement of the guides is neglected, often a patch job such as guide knurling which reverts back to original condition in approximately 1,000 miles, or bronze walls of the stock guide which inevitably results in cracked guides are recommended at your local shop.

With the **OTTO PARTS** removal and installation tool rental service it is easy to replace your own guides and enjoy the satisfaction of a job well done. With the savings on outside labor costs you can have aluminum bronze guides for about the same price as having stock steel guides or bronze walls installed at a local shop

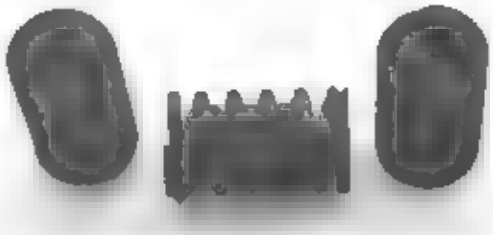
It is important to note that the wear rate of the valve guides is the product of several factors. Probably the most important of these is the material chosen for the guide and adequate lubrication. It seems that many so called experts prescribe valve stem seals to prevent passage of oil through the intake guides and into the combustion chamber. While oil control here is important, sealing the guide from lubrication is not the best long term solution. As valve stem seals result in increased valve guide wear. The best solution is controlled lubrication thru close stem to guide fit. For this reason the **OTTO PARTS** guide is superior to other bronze guides thru design and close tolerance fits. If you want a valve guide that will give you the best valve and seat life, then clearly you will want to install these guides. They are competitively priced

Order
#IG-131 (Set of 6)
INTAKE GUIDES WITH INSTRUCTIONS
#EG-131 (Set of 6)
EXHAUST GUIDES WITH INSTRUCTIONS
#GT-131 GUIDE INSTALLATION TOOLS
#IG-131-10 OVERSIZE INTAKE GUIDES
#EG-131-10 OVERSIZE EXHAUST GUIDES
#IT-131-R REMER FOR OVERSIZE GUIDES

STOCK VALVE SPRINGS

These are either the original GM spring or the TRW equivalent. While they are adequate for moderate service engines with stock cams, they are not adequate for enthusiastic driving or cams with increased lift. Valve springs should always be replaced when service is required on the heads. If you have a 1960 or early 1961 engine with 1 1/8" O.D., specify 1960 small spring. All others are the same.

Order #DS-118

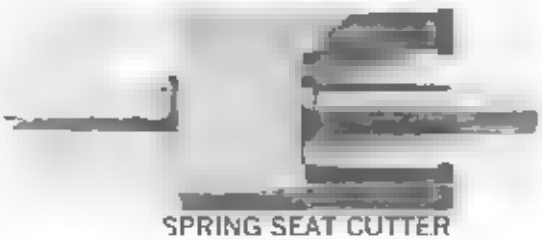


DUAL VALVE SPRINGS

This spring should be installed with any cam that has .450" lift or more. With two springs doing the work of one and a slightly larger diameter, this valve spring will retain adequate seat pressure for the life of the engine. This is not an extremely stiff spring, so it does not cause adverse wear on the cam. Installed at 1.70" it is about 110 lbs. and will take a set in use to approximately 95 lbs. The stock spring is approximately 90 lbs. new and will drop to 60 lbs. or less before 50,000 miles. The minimum spring seat pressure listed in the 1965 GM manual is 78 lbs.

Installation of these springs requires slightly enlarging the spring seat in the head to blend with the existing bottom. This can be done with the cutter we offer on a rental basis and a slow speed drill motor. You will also need the OS-124 retainers.

Order #OS-123

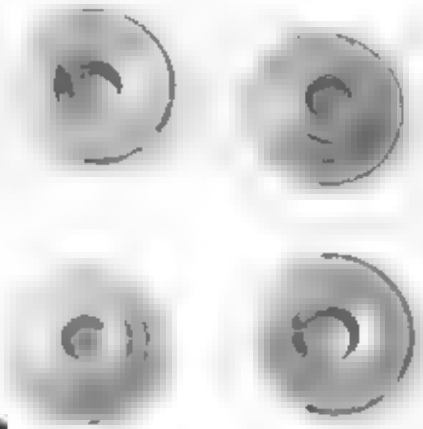


SPRING SEAT CUTTER

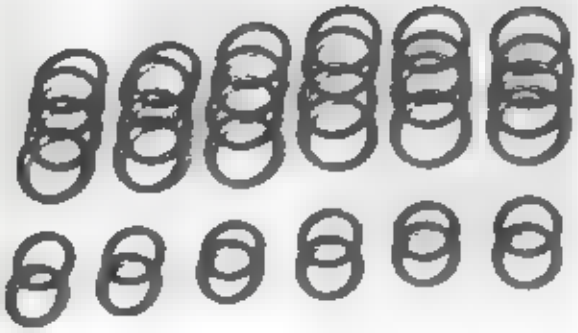
OVERSIZE RETAINERS

These retainers are hard anodized aluminum to go with the OS-123 dual valve springs. We do not recommend aluminum retainers on springs with flat dampers, like the stock springs, because the floating flat damper eats the aluminum. This problem does not exist with the dual spring.

Order #OS-124



"O" RING SEALS, PUSH ROD TUBES



These "heat resistant" "O" rings are of a specific compound of Viton selected to meet the requirements of the Corvair. They have a critical heat factor rating that is well above temperatures your engine will reach. These seals have been field tested under extreme conditions without failing. A real labor saving investment when compared to the work involved in replacing stock type seals.

Kit includes 36 "O" ring seals, 24 large for push rod tubes and 12 small for lower head stud seals. Does one complete engine.

Order #RS-114

HIGH TEMP ENGINE GASKET SET

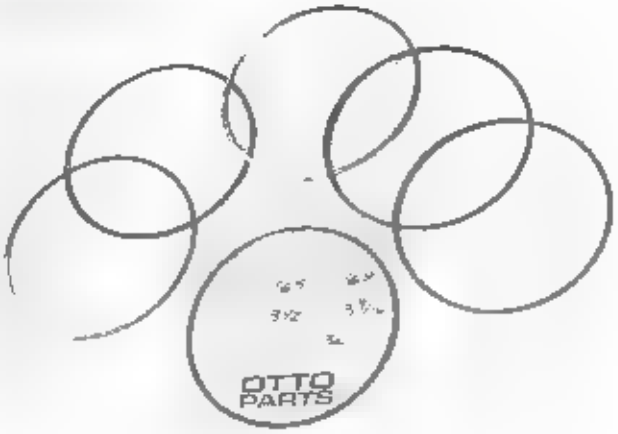
This is the highest quality engine gasket set available. It contains all the gaskets required in an engine rebuild. It even has an oil filler cap gasket not included in ordinary gasket sets. The head gaskets are **OTTO PARTS** solid copper which allows for bore sizes up to + 060 overbore. All O-rings are high temp Viton and so are the oil cooler seals. Most of the flat gaskets are special cut on our dies from a special high compliance material that seals much better than paper gaskets. (Does not include valve stem seals, See P/N IG-131). One often overlooked cause for oil leaks after a rebuild is the top cover bolts. For details see our P/N BK-159.

If you will supply the following information we will custom tailor your gasket set for the exact engine you are rebuilding.

Specify: (1) year of engine, (2) bore size, (3) thickness of head gasket (stock is .032), (4) type of heads (140 or other), (5) if you have an **OTTO** pan or rocker covers.

Order #RS-112

BIG BORE HEAD GASKETS



Now available to fit all year model Corvairs, stock through 3 9/16" over bores.

These head gaskets are manufactured from solid copper and are reusable by torch annealing.

These gaskets are essential for every bored out Corvair. Stock head gaskets should not be used because they will hang over into the increased bore size and cause detonation. Gasket and head erosion from flame exposure may occur.

Due to lower octane levels in the fuel available today, some pinging in the high performance and turbo charged engines is being experienced. In order to simplify a minor reduction in compression, to adjust to new fuel standards, a gasket that is .010" thicker than stock is available. Thickness is .042" stock is .032

These head gaskets are also ideal to compensate for cylinder head resurfacing when no compression increase is desired. In many cases, .030" or more is required for a good cleanup. Due to the solid copper design you can "stack" these gaskets two high and mix or match the two thicknesses to acquire the head volume desired. This practice is also helpful when putting a turbo on high performance heads. Many persons overlook the fact that increased bore sizes also increase compression.

When ordering you must specify 1. year of engine. 2. bore size. 3. thickness desired.

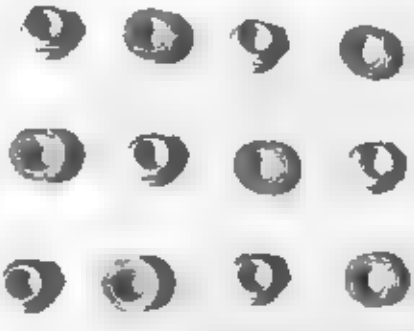
Kit includes 6 solid copper gaskets and instruction sheet.

Order #HG 106 **032 thick**
Shipping Wt. 4 oz. **042 thick**

HEAD NUT KIT

The flange type nuts are heat treated and cad plated. The heat treat makes them satisfactory for reuse one or two times. The cad plate retards rusting.

The stock nuts are "dead soft" and a very poor risk for reuse because the threads have stretched and will not maintain torque. A soft nut, even a new one, will stretch the threads and relax head torque under operating conditions, stress, heat and normal engine movement under load. A blown head gasket is generally blamed on anything but the fasteners, while this is the most likely cause for this failure. Don't risk an otherwise fine engine rebuild to cheap or fatigued hardware.



Kit includes 12 flange type nuts, enough for one complete engine and instructions

Order #HN 107 **Price each**
Two sets

Shipping Wt. 6 oz

CYLINDER KIT

Rebored stock cylinders are maintained in stock for sale on an exchange basis. For 1960 model we stock 3 7/16'' standard bore. The original bore in 1960 was 3 3/8'', so this makes a '60 the same as a '61 and later standard, which can still be bored up to + 060. We must have '60 type cylinders with full circle fins for exchange

For early engines '60 thru '63 the only piston available is a cast piston. The ones we offer are equivalent to original GM pistons

For Late engines, '64 thru '69, we have both the cast piston and the TRW Forged piston

All overbored cylinders should be installed with solid copper head gaskets which have a larger inside diameter to allow for the increased bore size. If you are ordering an **OTTO PARTS** High Temp gasket set P/N RS-112 you will receive this type head gasket with your order. If you bought your gasket set elsewhere you should order our P/N HG-106. The Cylinders are cleaned and sandblasted before boring. This provides an excellent surface should you want to paint them black for improved cooling

CYLINDER KIT CONTENTS.

1. Rebored Cylinders
2. Pistons
3. Wrist Pins
4. Piston Rings

NOTE: Cylinders submitted by customer must be of the same year as those ordered and are subject to our inspection

Cylinder Kits sold on an exchange basis only. Send in carefully packaged exchange cylinders with order.

Specify + .020, .030, .040, .060, in addition to the Part No., also indicate if substitution is acceptable in the event we are out of your preferred bore size.

Order

#LK-161-A
'64-'69 Ramco Moly Rings, TRW Pistons

#LK-161-B
'64-'69 Total Seal H.P. Rings, TRW Pistons

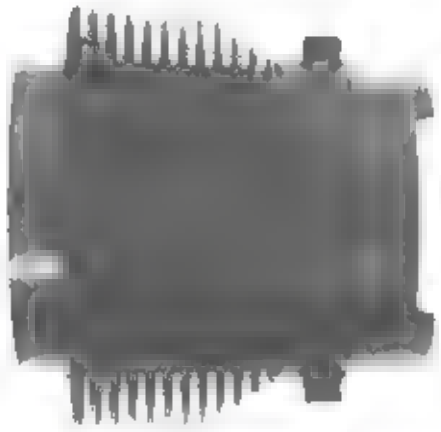
#LK-161-C
'64-'69 Total Seal Pro Rings, TRW Pistons

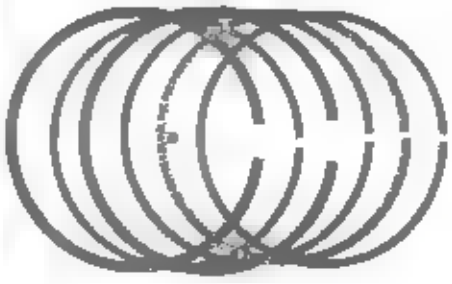
#LK 161 D
'64-'69 Ramco Moly Rings, Cast Pistons

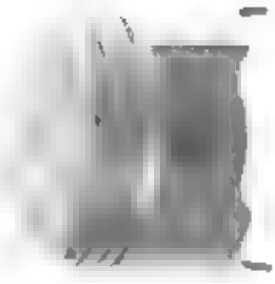
#LK-161-E
'64-'69 Total Seal H.P. Rings, Cast Pistons

#EK-161-A
'60-'63 Ramco Moly Rings, Cast Pistons

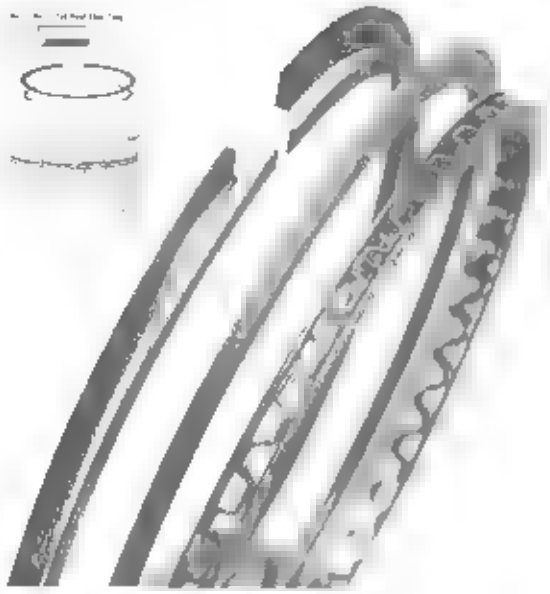
#EK 161 B
'60-'63 Total Seal H P. Rings, Cast Pistons







TOTAL SEAL PISTON RINGS



High Performance Total Seal

These are the famous gapless piston rings that eliminate blowby that is common with gap end rings. Increases power, fuel economy, and ring life. Reduces friction, fuel dilution and engine maintenance. These rings are available from **OTTO PARTS** in all bore sizes common to the Corvair. The High Performance version of this ring is ideal for all long service street type applications. The flanks of the ring are moly coated for less ring to groove friction.

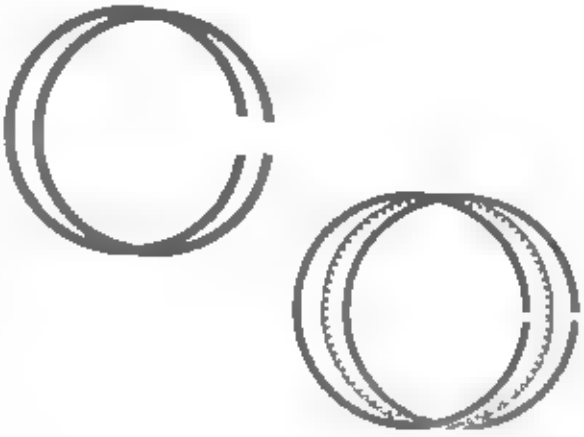
Pro Set Total Seal

The Pro Set features a moly inlaid top ring with a total seal second ring. This is the ultimate set for longest service life or high performance use. All Turbos should use this ring.

You must specify bore size and year of engine. Each part # is 6 piston sets.

Order
#TH 155
Total Seal High Performance
#TP 156
Total Seal Pro Set

RAMCO MOLY PISTON RINGS



These Rings feature a Moly Top Ring, Cast Iron Second Ring and three piece Chrome Oil Ring. The Moly Top Ring offers high thermal compatibility, quick seating to new or rehoned Bores, reduced Cylinder drag and wear long life sealing ability. Making them ideal for use in your Corvair and superior to Chrome Top Ring Sets.

You must specify Bore size and year of engine.

Six Piston Ring Sets (one engine)

Order #MR 154

OTTO PARTS

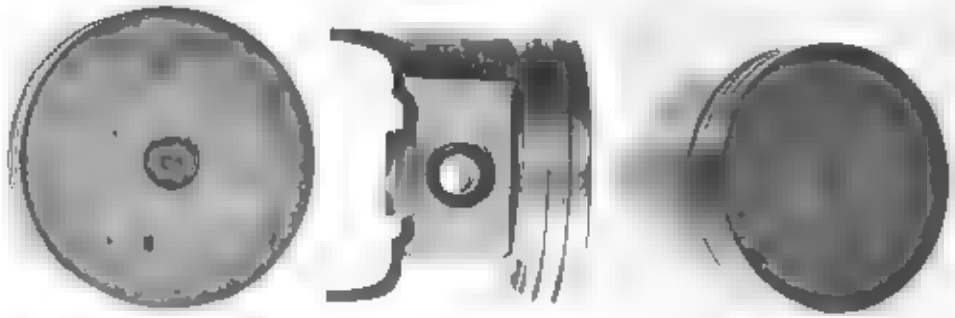
TRW FORGED PISTONS

These are the ideal piston for long service life This Piston set should be priority for Turbo's and other hard running engines, where a high degree of reliability is required. They offer a high degree of stability with excellent wear characteristics which maintains a close piston ring to groove clearance. This contributes to long piston ring seal A product well worth the extra cost in any engine!

- Comes with Wrist Pins fit to Pistons
- Available for '64-'69 only
- Sizes + .020, .030, .040, .060

Order #PP 153

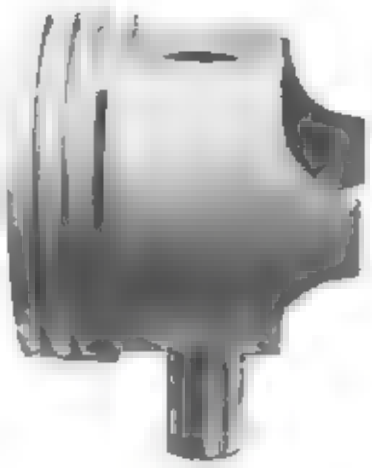
See Price List for $$$ Saving Offer.



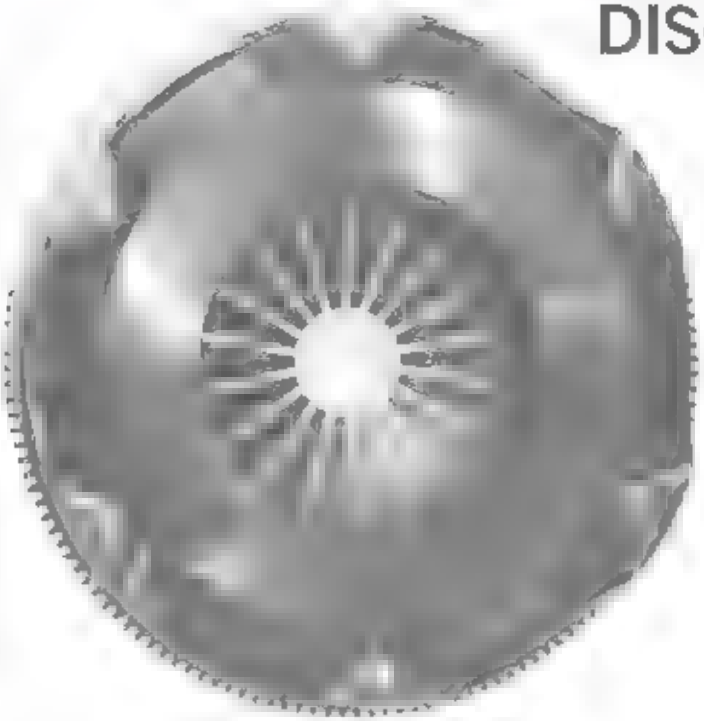
CAST ALUMINUM PISTONS

These pistons are equivalent to stock pistons. A suitable product for the budget oriented light-duty engine

Order #CP 132



MODIFIED PRESSURE PLATE & DISC



The Pressure Plate is resurfaced and a new 1,500 lb. diaphram is installed which is 50% more pressure than the '65 and later high performance Pressure Plate

We find that the 1,500 lb diaphram and heavy duty disc are an ideal combination for long service life yet adequate to hold even highly modified engines

The increase in release pressure at the pedal is hardly noticeable and gives a firm chatter free engagement

The disc is new with a high R P M heat resistant facing that will give long service life. The spring loaded hub absorbs shock loads to the transaxle and gives smooth operation.

CONDITIONS

Due to the scarcity of these cores they are sold on an exchange basis only. No core deposits! A pressure plate of the same type you submit will be returned to you. Your core must have a good ring gear!

COMPLETE CLUTCH:

Includes: Pressure Plate & Disc, can be ordered separately. See Price List

Order #MC-160

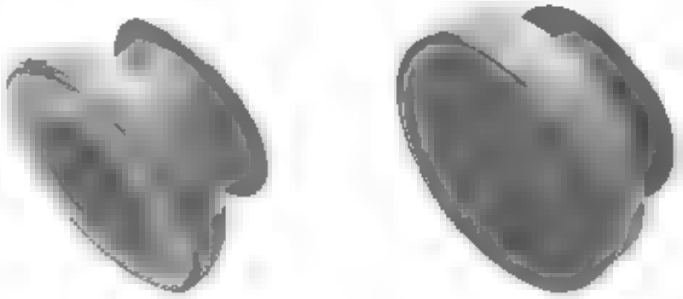
For New Pressure Plate Bolts (set of 6)

Order #PB-143

CLUTCH RELEASE BEARING

A new release bearing should be installed with your new pressure plate. It is unlikely that an already used bearing will last the life of your new clutch, so replace it now and save the labor of removing your engine to replace it later

Order #TB-147-E '60-'63
Order #TB 147-L '64-'69

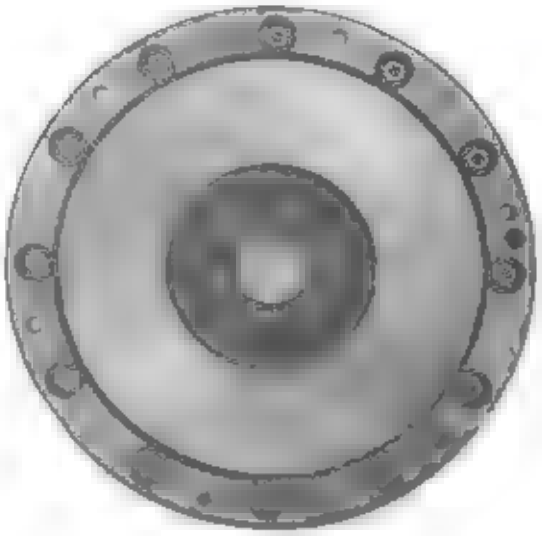


TAPER BOLT FLYWHEELS

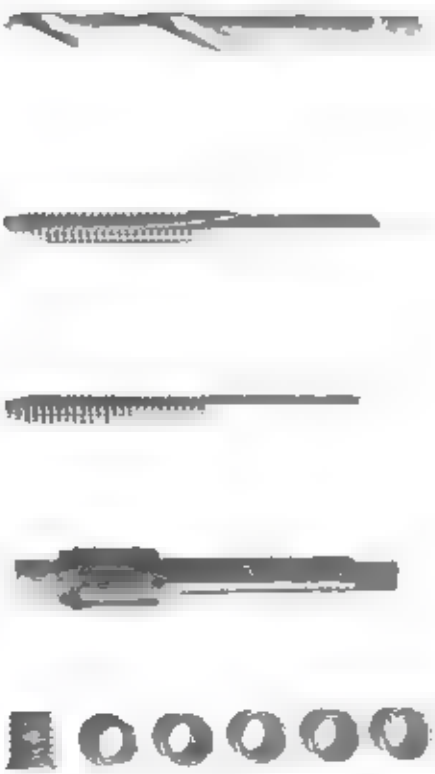
These flywheels were formerly offered by **OTTO PARTS** as a machine service only. Now offered on an exchange basis. The rivets are replaced with a heat treated taper-head bolt for long rattle-free service. The inertia ring is left off to reduce flywheel weight approximately 3 lbs. The flywheel face is resurfaced and the finished assembly is trued, but should be balanced to your engine. There may be copies of this product but there is no peer to this **OTTO PARTS** original

Order #MF-176

NOTE: You must send in your flywheel and specify year when ordering. Cores subject to our inspection. We will not accept flywheels which have been welded



STEEL THREAD INSERTS



The ideal fix for aluminum threads. The thin wall design makes them suitable in almost any close place. The unique feature of being expanded in the hole after installation insures the insert will stay in the hole.

The 1/4-20 inserts are perfect for repairing the threads where Corvair rocker covers and oil pans are attached. Order long inserts for valve cover and oil pan. Order short inserts for shroud holes

The 3/8-16 inserts come in a longer length for the special application of case stud inserts When ordering please specify "3/8-16 Longs" for the crankcase stud thread inserts A short insert is 1½ x diameter. A long is 2 x diameter

Tools are required when installing the steel thread inserts There will be a deposit to be refunded upon return of the tools and a small rental fee

Order

#SI-113-A
1/4-20 long or short

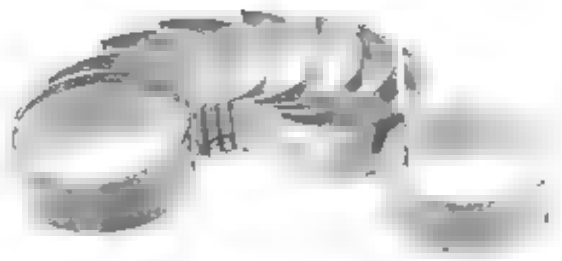
#SI-113-B
5/16-18 short only

#SI-113-C
3/8-16 long or short

#SI-113-T
Installation Tools

ROD & MAIN BEARINGS
Clevite 77

These Bearings have long been recognized by professionals and enthusiast alike to be the ultimate long life, high load bearing. When supplied with adequate lubrication they will provide maximum bearing service and durability under all condit ons



Rod Bearing set of 6

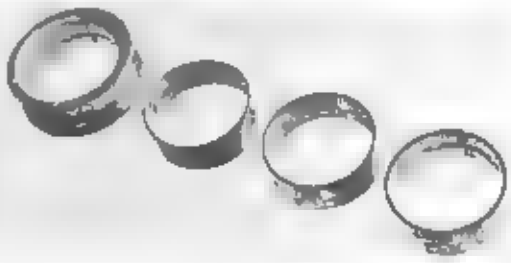
Available in: Std., 001, 010, 020, .030

Order #RB-134 For Std. and .001
Order #RB-134 OS For oversizes

Main Bearing, one engine set

Available in: Std., 002, .010, 020, 030

Order #MB 135 For Std and 002
Order #MB-135-OS For oversizes

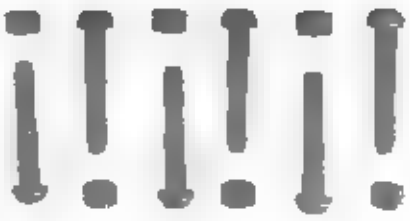


Specify Size

CONNECTING ROD NUT & BOLT KIT

The con rod and bolts are fatigue prone and should be replaced with any rebu ld. **OTTO PARTS** did a magna flux inspection of the old bolts from five engines, 40% of the bolts and 60% of the nuts showed signs of fatigue In almost every case the bearing bore will be out of round, New bolts should be installed and the bearing rod end resized

Order #RN-138 set of 12 bolts & nuts
Order #RN-138-N set of 12 nuts only



PILOT BUSHING

Here is another often overlooked item that requires engine removal for replacement

Order #BP 182

Stock Crank Hub

In an engine rebuild this part is often overlooked and can result in unexpected problems in an otherwise quality rebuild. Here are the things to inspect. Bolt to Tapped hole fit, with the threads clean and the bolt all but 3/8" engaged there should only be a just noticeable side movement. A stretched or elongated thread hole will not hold the flywheel tight. On the contact face of the hub should there be any evidence of metal transfer, the flywheel has at sometime in the past worked loose and this condition is sure to exist. On the ground seal diameter the seal contact area must be free of any scratch or imperfection, wear should be less than .005". The cam drive gear is *very critical*, if this gear is worn it will quickly wipe out a new aluminum cam gear. The contact area of the gear tooth should have a round contour, if you can see a flat spot as you turn it in a bright light it should be replaced.

Includes: Crank hub, Bolts, Gasket

Order #SH-129

SUPER BOLT, CRANK HUB

[illegible] Order #CH 142 Specify '60 '63 or '64 '69

FLYWHEEL HOUSING SPACER

This seal spacer is required when installing the 1964-69 "one stroke" crankshaft to a 1960-63 engine. The spacer is placed on the rear seal prior to installation of the seal in the housing. Use of the spacer places the seal over the appropriate area on the crankshaft.

Order #FS-104

FLYWHEEL TO CRANK BOLTS

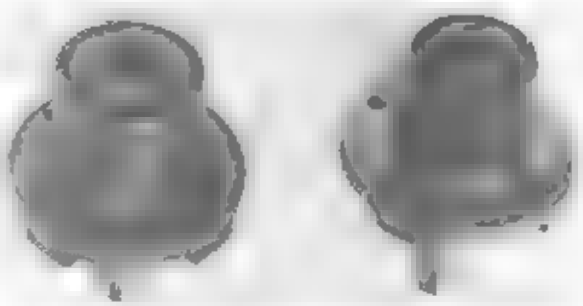
Don't take a chance on not replacing this inexpensive bolt set. Having already been torqued to 50-55 Ft. Lbs., they are not a safe bet for reuse.

Order #FB-139

BLOWER FAN BEARING

Here is a part that is often overlooked at time of rebuild. This part is easily replaced while the engine is apart and requires a good deal of labor to replace after the engine is running.

The bearing on an old engine has probably gone over 50,000 miles and is not likely to go that many more. When this bearing starts to drag it can ruin several good fan belts before it is discovered as the culprit involved. We feel it is good judgement to replace this part with any rebuild.



Order #FB-146-E for '60 thru '64
Order #FB-146-L for '65 thru '69

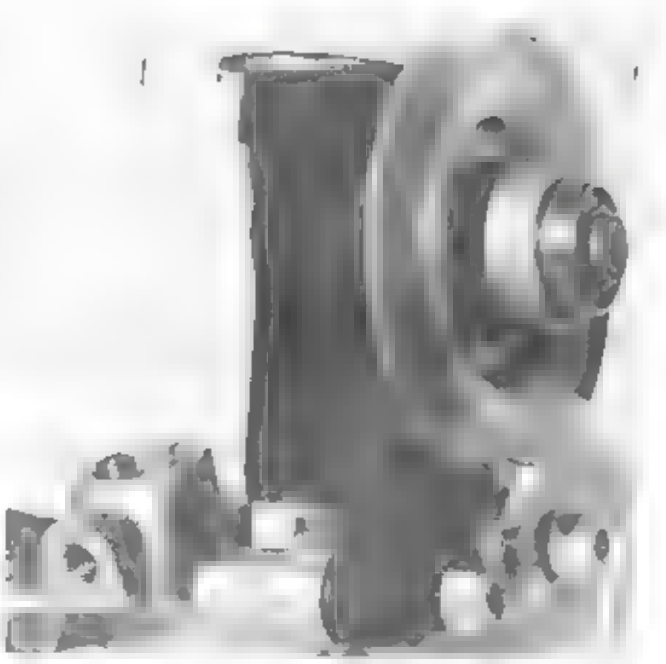
STOCK IDLER PULLEY (Rebuilt)

Rebuilt engine still noisy? Strange sounds from engine? Check your Idler Pulley. This seldom checked or renewed part is the source of many mysterious noises in the Corvair Engine

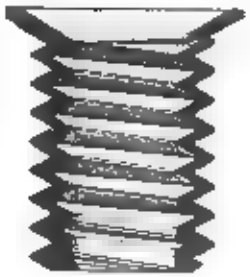
This Idler Pulley and bracket assembly features a black painted pulley and black anodized bracket. The casting flash is removed from the periphery of the bracket for appearance. These attractive plated parts are reassembled to close tolerances, with a new, heavy duty double roller bearing for maximum durability

Order #IP-109

Sold on an exchange-only basis. Send in your old pulley with order.



SPARK PLUG THREAD INSERTS



Trade name Time-Serts because the inside thread is timed to the outside thread providing a uniform thin wall, steel insert. As shown in illustration spark plug heat range is not altered because

1. Thin wall design of insert.
2. Spark plug washer seals on recut aluminum seating surface.
3. Insert is expanded into the aluminum after installation to provide maximum heat conductivity through the insert.

You can install these inserts in a pair of Corvair heads in about one hour without the use of any power tools.

The use of these inserts eliminates the risk of stripping or cross threading soft aluminum threads. This unique insert obsoletes Heli-Coil process and is much easier to install

Kit includes
Six steel inserts and use of installation tools.

Order
#TI-110
#TI-110-T
Installation Tools

Installation Tools are required to Install Inserts.

FAN PULLEY, INCREMENTAL RATIO WITH SUPERBELT

The **OTTO PARTS** incremental ratio Pulley provides four fan speed ratios, 1.20-1, 1.25 1, 1.32 I, 1.40-1. By using the ratio best suited to your climate or application you will benefit from both greater net horsepower and increased fuel economy. This is due to the reduced horsepower requirements of the cooling fan, which also reduces fan belt stress for a longer lasting belt See power requirements below.

It is important to note here that reducing the fan speed does not always reduce the cooling effect of the fan. When the fan speed ratio was selected by GM there were some compromises to be made. A fan speed ratio that will deliver enough air to cool the engine at normal driving speed with a minimum horsepower requirement from the engine will not deliver enough cooling air at idling speed. A fan speed ratio that would cool your engine at idle would turn the fan too fast to pump efficiently at highway speed. It appears that the choice was made to favor the idling speed with pumping efficiency just starting to fall off at about 3,000 engine RPM With the ratio set at 1.4, testing indicates engine cooling is as good as the stock ratio in normal driving and maybe better at highway speeds. The 1.32 ratio works great at highway speeds and is adequate in city driving for all except 100° plus weather For cold climates the lower ratios are helpful in getting adequate engine temperature

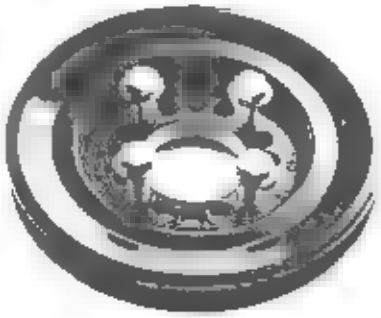
Those of you who are road racing will find that you run cooler with about the same required horsepower using the 1 25 or 1.20 ratios and a full size fan, as opposed to the stock pulley with a cut down fan

Ratios are selected by removing four mounting bolts, rotating the top half of the pulley to the desired ratio location, as indicated on the pulley and replacing the four bolts

Includes: Fan Pulley, shakeproof mounting bolts, spacers to maintain belt alignment, SB-580 Super Belt, and Instructions.

This pulley is supplied with a tried and proven **OTTO PARTS** Super Belt. It is good to have a spare belt which you can order with your pulley at one half the two belt price

Order
#FP-148
'60-'64 w/1-3/16" Fan Bearing
#FP-149
'65-'69 w/1 1/2" Fan Bearing



RPM	HORSEPOWER REQUIRED				
	STOCK PULLEY	OTTO PARTS INCREMENTAL PULLEY			
	1.58:1	1.40:1	1.32:1	1.25:1	1.20:1
2,000	1.0	0.9	0.8	0.6	0.5
3,000	3.5	2.6	2.5	2.0	1.9
4,000	8.0	7.0	5.2	4.0	3.7
5,000	15.6	10.6	8.3	8.0	7.5
6,000	27.0	18.5	16.6	13.4	11.8

ALUMINUM CRANKSHAFT PULLEY

This lightweight, polished pulley is ideal for those who want to reduce weight or dress up their engine. The precision marked degree ring is installed by you. It eliminates the need for a special degree wheel when checking cam timing and provides accurate reference for checking distributor advance curve and total advance when tuning your engine.

Order #AP-070

Pulley & Degree Ring

SUPER FAN BELTS

Since GM discontinued the original Corvair fan belt the belts available to fit your Corvair have been unreliable. **OTTO PARTS** has addressed the problem directly by having made a special belt for the Corvair application. The result is a belt that is even more reliable than the original GM belt. We have given these belts to our most demanding users and even road racers for field testing

The result in every case was praise and great reviews. If what you want in your fan pulleys is a tough reliable belt made to get the job done day after hard driving day; then you can join the growing list of satisfied Super Belt users and forget your fan belt problems of the past, by ordering now.

Order
#SB-560 — for use with stock pulley
#SB-580 — for use with OTTO Parts Incremental Fan Pulley

PRECISION DISTRIBUTORS

Your engine's performance depends directly on the distributor, yet the distributor is one of the seldom checked, often taken-for-granted components in the engine compartment. Many well rebuilt engines never achieve their full potential because they are returned to service with the old worn out distributor

Even with a brand new stock distributor performance potential is lost because the stock advance curve is far from optimum for today's fuels. These distributors will improve the engine's responsiveness and compatibility to current fuel available

Our precision distributor is a modified, rebuilt stock distributor that has dual bushings to stabilize the shaft, improve point function, and lengthen distributor life. The points cam, advance weights and springs are replaced. We modify the mechanical advance to supply the proper timing for compatibility with today's fuels at all RPM. This eliminates the need for vacuum advance

Please send a core that you would want your distributor built from Before sending us your distributor remove the following: cap, rotor, points, and vacuum advance pot

Sold on an exchange basis only

Order #PD-166
Order #PD-166-T for Turbo's

PERMA-SPARK COIL

Made by Allison Ignition this street coil provides a spark twice as hot as a stock coil. The energy output is balanced voltage versus current, so that the actual energy is doubled. Works great with stock ignition and is ideally matched to the Allison Electronic Ignition

Order #HC-165

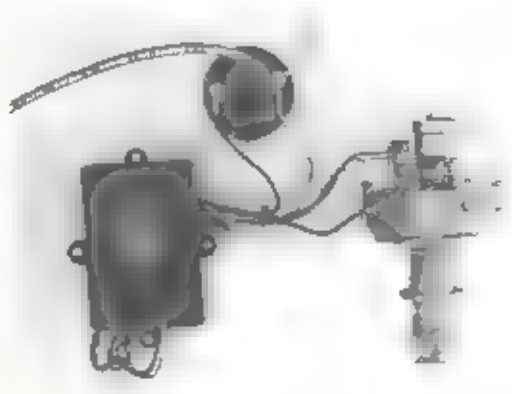
SILICONE PLUG WIRES

With original type shroud boots for a positive seal to the top shroud, this hi-energy ignition wire is manufactured by Allison Ignition with a new concept in this type of wire. The jacket is made from 100% virgin silicone. The conductive multi fiber core is "resistance tuned" to deliver maximum energy to the plugs. It is unsurpassed in suppression of radio noise

Best of all it will probably be the last set of plug wires you will ever need to buy for that same engine, as it will deliver "like new" performance after 100,000 miles.

Order #PW-164

ALLISON XR700 ELECTRONIC IGNITION



OTTO PARTS offers this breakerless Ignition system simply because we feel it is the best With a lifetime warranty this unit has to be reliable. The advantages are: Quick starts hot or cold, smoother idle, eliminates missing caused by improper spark, precision timing 1/10 of one degree, and tune-up requirements are reduced to changing plugs maybe one fourth as often as with a stock ignition. Not only do you save money and time, but your engine runs like you just did a tune-up, all the time.

The installation of this system does not prevent the use of the vacuum advance. In case of emergency it can be quickly switched back to stock

This easy to install reliable system is truly a wise investment

Order #EI-167

See Price List for $$ Saving Offer!

AIR FILTERS
(For 140 or 4x1)

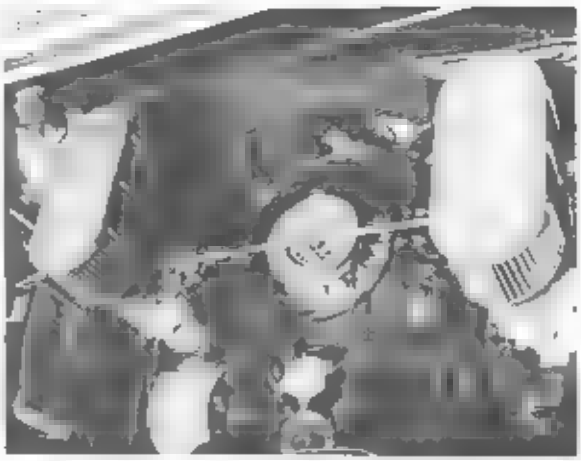
Here is a new concept in air filters. Attractive, performance oriented, they give your engine that low profile Webber Look. Gold anodized aluminum frames hold custom made K & N elements which should never need replacing. Just clean them in solvent, recoil and you are ready to go another 30,000 to 50,000 miles. These are the leading element for offroad use and fast becoming the preferred replacement element.

Free breathing design offers both economy and performance benefits. You will be glad you switched

For 140's **Order #AF-171-B**

For use w/**OTTO** 4x1 Kit **Order #AF-171 A**

For use on 2x1 Engines **Order #AF-171-A,** requires making block off plate and bracket



4×1 CARB KITS
(converts 2×1 Engines)

This kit will convert your 2x1 engine to a 4x1 much like a 140 engine. The progressive linkage is very positive and well constructed to stay adjusted. Linkage ratio is designed to gradually open the secondary carbs after 25% throttle opening on the primary carbs. Testing indicates this to be the ideal ratio for best throttle response and driveability. The horsepower increase on a stock engine is 40% and even more if a good low speed cam with slightly increased lift is used, such as the **OTTO PARTS** OT-10 cam

The adaptor casting also rotates the carb 90° which eliminates carb flooding and starving in hard cornering

Those of you who have automatics will really be impressed with the sharp improvement in response from stop lights.

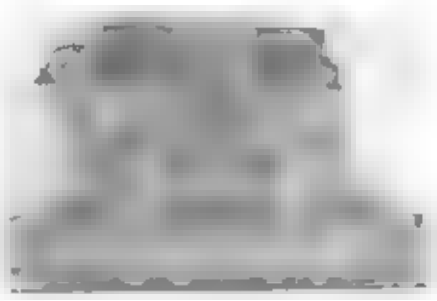
When the torque curve of an engine with this conversion is compared to a stock 140, it offers a higher torque curve than a 140 hp engine at engine speeds up to 3,000 to 3,500 RPM, which is obviously the most used RPM range in street type use. In respect to gas mileage, when driven with a light foot or in the same manner as your stock engine it will give comparable mileage

The carbs you will need with this kit is two more like the ones that came on your engine. Year is not important but they should be a like pair and must not be 140 secondary types.

Should you want to use carb base insulators, which we do recommend, order 4 insulators and 4 additional base gaskets

Kit includes: All linkage pieces, 4x1 Adaptor Casting, fuel block, fuel hose, hose clamps, hose fittings, carb base gaskets, carb studs, and flanged carb mounting nuts.

Order #KK-172 A



140 CARB LINKAGE & ROTATORS

For those of you who have wished for an improved Linkage Kit that would stay synchronized and improve the low and mid throttle response, this Carb Kit is for you.

The rotators turn the carbs 90° which eliminates carb flooding and starving in hard cornering.

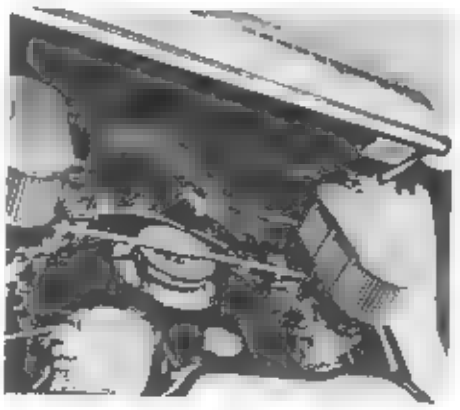
The progressive Linkage is very positive and well constructed to stay adjusted. Linkage ratio is designed to gradually open the secondary carbs after 25% throttle opening on the primary carbs. Testing indicates this to be the ideal ratio for best throttle response and driveability

All highway driving is within the limits of primary carbs, with the linkage opening the secondaries at a rate that improves the air flow balance to all cylinders. This improves low and mid throttle response. These features are also helpful on automatics.

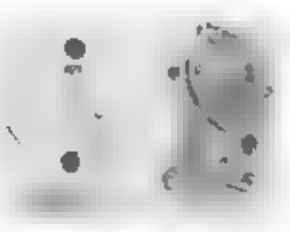
This kit requires the use of 4 primary type carbs so you will need to get replacements for the 2 original secondaries on your 140

Should you want to use carb base insulators, which we recommend, order 4 insulators and 4 additional gaskets. Should you want new flanged carb nuts, order P/N CN-137 Kit includes: 4 carb rotators, all linkage pieces, fuel block, fuel hose, hose clamps, hose fittings, carb base gaskets, carb studs

Order #KK-172-B



Fuel Pressure Regulators



One of the most important factors in obtaining better gas mileage is accurate fuel level control. With a stock fuel pump the fuel pressure to the carbs varies with engine RPM and so does the fuel level. For this reason almost without exception the addition of a fuel pressure regulator will result in a noticeable improvement in gas mileage

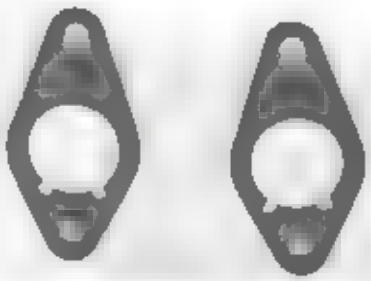
This dual outlet regulator lends itself to the Corvair installation. Preset at 4 lbs., it is adjustable on the car.

Order #PR-170

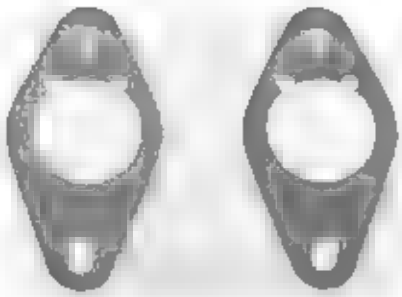
Carb Base Insulators

These insulators isolate your carb's from high head temperatures and prevents carb fuel per culating. A cooler inlet charge will give a smoother running engine in all but the coldest climates. **OTTO PARTS** recommends you use a carb base gasket (BG-110) on top and on bottom of each insulator.

Order #CI-130



CARB BASE GASKETS



This is a precision high pressure gasket. **OTTO PARTS** cuts these from a quality non hardening high compliance material.

To insure against vacuum leaks the base gasket should be replaced each time the carbs are removed. If you are using insulator blocks a gasket should be used on each side of the plastic insulator

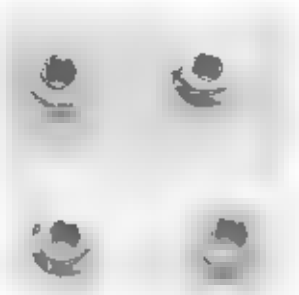
Most carb rebuild kits supply a very hard base gasket that does not have the required low speed cut outs. These should be replaced with this gasket. We recommend the set of 16 so you will have a spare set on hand the next time you remove your carbs.

Order
#BG-110-4
set of 4
#BG-110-16
set of 16

FLANGE CARB NUTS

If you have ever noticed the metal deformation around the carb mounting holes caused by the original nuts, then you are well aware of the need for a flange nut in this application. These nuts are zinc plated and make a nice finishing touch

Order #CN-137



CARB REBUILD KIT

This is a quality rebuild kit by Filco. We have had good luck with them. You might want to substitute the base gaskets for our P/N BG-110 Don't forget a good rebuild should also get new main jets, our P/N CJ 145.

Each kit does one carb. Fits all "H" and "HV" carbs

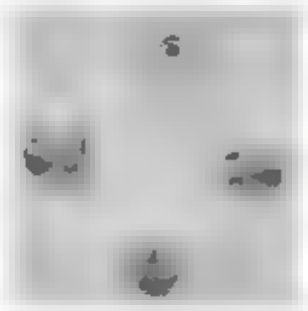
Order #CR-173

CARBURATOR MAIN JETS

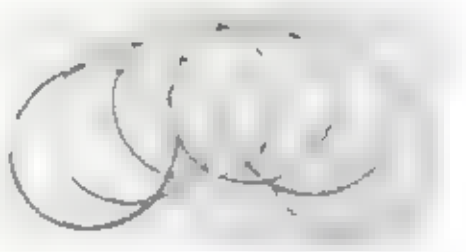
Precision main jets are a must whether you are tuning for performance or economy. While the main jet is often assumed to be acceptable if it looks OK, this is a common pitfall in carb tuning and rebuilding. Both erosion and corrosion can affect the fuel flow thru the main jet by two or more sizes. You may also be surprized by the improvement in your 140 when you throw out those .049 secondary jets and install a set of 052/.053 jets

Available in .050 thru 056

Order #CJ-145-(50 thru 56)



CYLINDER BASE GASKETS



These gaskets will slightly lower the compression ratio. They are die cut from copper sheets .022" thick (010" thicker than stock). They are the same thickness that GM used on air-conditioned engines A special ridge is pressed into the gasket to "insure a positive seal, even with a slight warpage in the case surface "

Each .010" thickness increase adds 1 Sec's to the head chamber volume. This equates to an approximate 225:1 compression ratio decrease in a late engine when used in conjunction with our stackable copper head gaskets, P/N HG-106 We do not recommend the stacking of base gaskets; however, with one 022 cylinder base gasket and the proper choice of our head gaskets you can reduce compression to the desired ratio.

Order #BG 174 set of 6

4 SPIDER DIFFERENTIAL KIT

This is a new heavy duty differential carrier that provides for 4 spider gears. The stock carrier has only 2 spider gears so the load per gear is reduced by 50% with a 4 spider carrier.

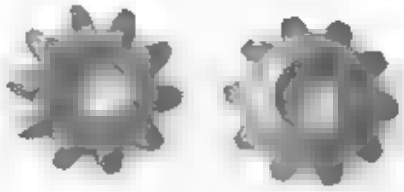
In the differential it is the spider gears that are the weak link. This unit is absolutely essential for hard running street cars, drag racing, auto-X, road racing, and all off road applications.

The parts supplied with the carrier are those that are not present in a stock carrier. However, it is not good practice to mate new gears to old ones. For this reason we recommend that you also replace the two stock spider gears and both side gears along with the spider cross shaft.

If your objective is a bullet proof transaxle consider one of our heavy duty input shafts, P/N IS-175.

Order #SK-023

SPIDER GEARS



Two are required for a stock differential or to complete the set in a 4 spider kit.

Order #PG024

SIDE GEARS

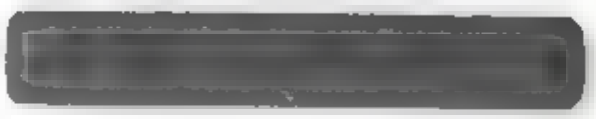
Two are required for both stock and 4 spider differentials. However, if you have a posi you should order one each of the two part numbers listed. Both parts fit all years.

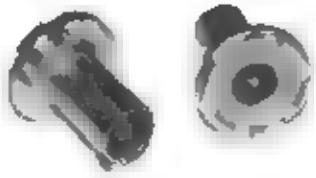
Order #SG-025 Std side gear
Order #SG-026 Posi side gear

SPIDER GEAR CROSS SHAFT

If you are rebuilding your differential don't overlook this inexpensive but important part. It doesn't make good sense to mount a new gear to a worn shaft. One only required. Fits all years.

Order #SS-027





THROW OUT BEARING COLLAR

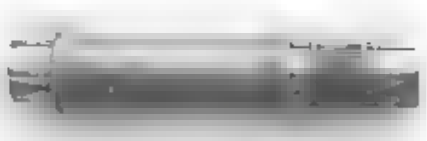
Machined from solid steel bar stock for a stronger more reliable part. Will not fracture like the stock cast iron part. The bore length for the input shaft seal has been changed to accept two seals. Located to place the seal contact of both seals on a new wear area of the input shaft. They have a cad iridite finish to prevent rust. For input shaft seals order P/N IS-157.

Order #TC-190

Pinion Shafts

Our Pinion Shafts are made from a stronger more wear resistant material. The spline lengths have been increased to provide maximum engagement and longer life of all related parts. These are for use in '65 thru '69 manual Corvairs, but they can also be used in early models without a speedometer

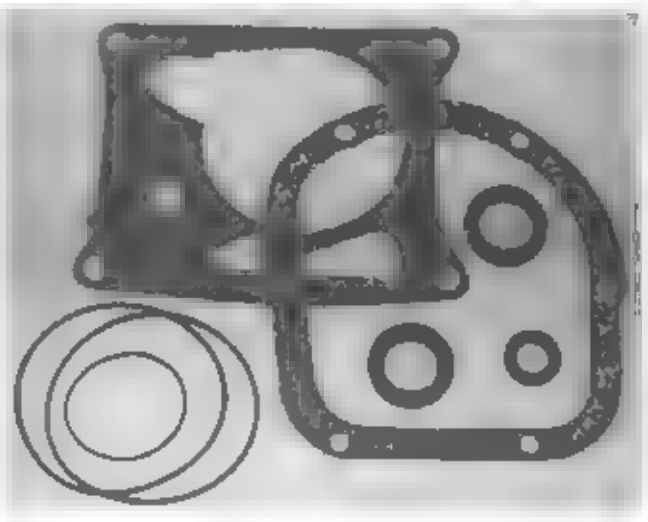
Order #PS-169



DIFFERENTIAL GASKET SET

This is a quality GM gasket set for all manual differentials. Specify Year.

Order #DG-183

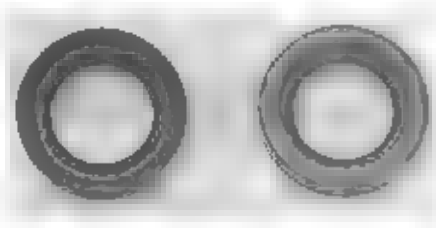


INPUT SHAFTS

Available to fit all year 4 speeds. They are made from a stronger high alloy material for greater strength and longer life. Both splines are precision machined. The seal and bearing diameters are ground to a very fine finish.

Order #IS-175 **Specify year**

INPUT SHAFT SEAL



This seal should be replaced any time you do service that allows access to the seal. A faulty seal here can result in an oily clutch or even worse a dry transaxle.

Order #IS-157

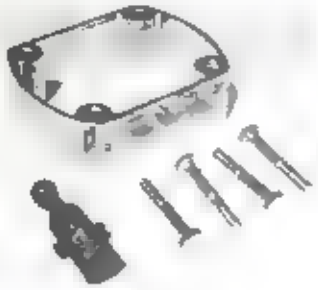
SPYDER EXHAUST WRAP KIT

(Fits all models)

Every Corvair Spyder owner can have 15 more horsepower when he needs it — at low RPM — by simply installing this inexpensive exhaust-wrapping kit. Jet-aircraft type ceramic-fiber insulation protects the exhaust system from the cooling-air blast under the car, keeping the exhaust gasses hotter so that they really put that turbo supercharger to work at much lower speeds than with the stock unwrapped exhaust. You can FEEL the difference! A rugged aluminum outer cover holds the insulation in place and protects it from the elements. Simple aluminum clamps are used for the 30-minute installation. Nothing complicated about it. This kit absolutely obsoletes old-fashioned and inefficient asbestos type wrapping.

Spyder Exhaust-Wrap Kit (Fits all Corvairs complete with instructions

Order #WK 103



QUICK SHIFT KIT

Reduces shift lever travel on all 3 & 4 speed Corvairs. Provides that quick, positive action that makes shifting a pleasure. The polished [illegible] die cast part [illegible] creased for durability. Instruction sheet included.

Order #QS-141 **Specify year model**

Lower Control Arms

This is a remanufactured part. The ends are remolded with a synthetic compound that is much more dense than the GM rubber, yet is adequate to absorb road and wheel vibrations. The stiffer less yielding material makes a dramatic improvement in the straight tracking of your Corvair. It also significantly reduces the camber change in cornering which not only improves handling but reduces tire wear.

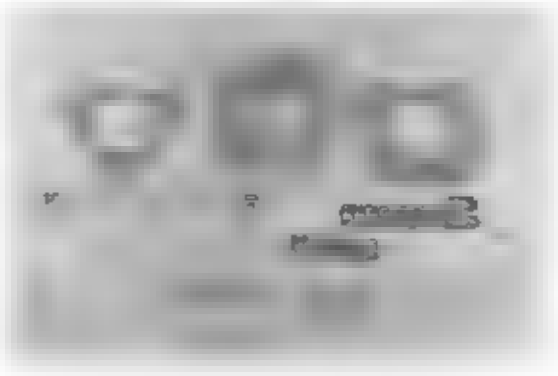
The material used is unaffected by differential oil or ATF which is one of the leading causes of failure in the stock bushing.

Sold on an exhange basis or with a 30 day core deposit

Order #CA-136

OTTO PARTS

S U CARBURETOR ADAPTER FOR CORVAIR TURBOS



This kit lets you replace the stock Carter YH carb with the more desirable S U carb. The S U is a variable venturi, demand sensitive carburetor which is ideally suited for turbo-charged applications. Cures starving in hard cornering and significantly improves mid and top end power. Some increase in boost pressure can be expected.

NOTE: We recommend a 1¾" or 2" S U for the Japanese equivalent) carb which can be found at your local foreign auto wrecker. Includes, adapter, hardware, gaskets, linkage and throttle jet.

Order #SK 045
Shipping Wt. 3 lbs.

Adapter Kit

OIL FILTERS

Original type oil filters are not difficult to get at **OTTO PARTS**. We stock the quality Wix filter. Why not order a years supply now? You will save on shipping and you won't need to remember to try to find one next time you want to change the oi

Order #OF-140

WIX®
OIL FILTER

OTTO PARTS

CORVAIR ENGINE TO VW TRANSAXLE ADAPTER-KITS

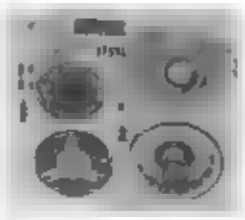
With these components, you can propel your VW, Porsche, or buggy with reliable Corvair 6 cylinder power. There are 2 basic methods to compensate for the opposite rotation of the VW and Corvair engines. Your choice depends on

1. Are you planning to remove and check or repair the VW transaxle?
   If so, use the reversed ring gear method.
2. Are you planning to rebuild the Corvair engine? Or do you have an IRS (double jointed halfshafts, VW or Porsche)?
   If so, use the reversed rotation method. This method requires the installation of a reverse rotation camshaft in your Corvair engine.

REVERSED RING GEAR CONVERSIONS

Using this method it is necessary to reverse the ring gear to reverse the drive direction of the transmission. Use a 12 volt Corvair starter. Specify flywheel choice. Steel flywheels are recommended for crawling, hill climbing and buses where clutch slipping is necessary to get the car moving.

5102A kit shown here with early pressure plate



BASIC ADAPTER KIT includes engine adapter, offset starter and bushing set, 12 volt Corvair flywheel (127 teeth)

Order #5101A — Kit w/aluminum flywheel
Order #5101S — Kit w/steel flywheel

DELUXE ADAPTER KIT includes engine adapter, offset starter and bushing set, 12 volt Corvair flywheel (127 teeth), heavy duty pressure plate, heavy duty clutch disc, spring washers and spacer kit for 3rd and 4th gears. Specify early or late pressure plate; early uses ring between the release fingers and throw-out bearing.

Order #5102A — Deluxe kit w/aluminum flywheel
Order #5102S — Deluxe kit w/steel flywheel

REVERSED ROTATION ENGINE CONVERSIONS

This is the way to go if you have an IRS single Beetle, Squareback or 914, 912 Porsche. The ring gear on these models cannot be reversed so we have to reverse the rotation of the Corvair engine by installing a reverse rotation camshaft. Use it with the reversed rotation VW flywheel. Specify 6 lb. aluminum or 6 lb. steel flywheel. Late pressure plate required; early w/release plate or late.

REVERSED ENGINE ADAPTER KIT includes engine adapter, HD pressure plate, HD clutch disc, throttle linkage, your choice of flywheel

Order #5152A6 — Kit w/aluminum 6V flywheel
Order #5152A12 — Kit w/aluminum 12V flywheel
Order #5152S6 — Kit w/steel 6V flywheel
Order #5152S12 — Kit w/steel 12V flywheel

NOTE. Reversed rotation camshaft kits required for these conversions is not included in the 5152 kits.

SEPERATE VW ADAPTER COMPONENTS

Order #5001	Engine adapter and hardware, gasket and seal
Order #5008	Throttle linkage
Order #5103	Corvair to VW installation manual
Order #500145	Gasket and seal set for engine adapter
Order #50017	Corvair to VW clutch pilot bushing (included in adapter kits)
Order #5003A	Aluminum Corvair to VW flywheel (use Co volt starter and offset starter kit)
Order #5003S	Steel Corvair to VW flywheel
Order #5053	Reverse engine flywheel and hardware (specify aluminum or steel, 6 or 12 volt)
Order #5005	Heavy Duty clutch disc (200 mm)
Order #5004	Early 200mm pressure plate (w/throw-out bearing carrier)
Order #5006	Late 200mm pressure (3 fingers, no collar)
	Reverse rotation camshafts, call for details
Order #5206	For Ball Retainer (for reversed rotation engines)

REVERSE ROTATION CAMS

The reverse cams are available in all of the Otto Parts grinds, see page 6 for grind information The OT-10 & OT 20 grinds are available in regrinds which requires a regrindable cam exchange. The hotter grinds are available in new proferal billets only. The prices given include the distributor reversing gear set. If you want cam only deduct amount shown for gear set P/N GS-196

Reverse Regrind **Order P N RG-194**
Reverse Billet **Order P/N RB 195**
Distributor Reversing Gears **Order P/N GS-196**

DUAL MUFFLER KITS
140, 110, 95

These muffler kits are a direct replacement for the original 140 H P exhaust system. The head pipes are mandrel bent to provide better flow. The mufflers are a quality replacement muffler for the 140 (use stock muffler straps). We also provide this same kit for all small valve cars by providing a head pipe and flange to fit the smaller exhaust manifold. When this system replaces the stock cross over pipe a reduction in head temp can be expected. Kit includes, (2) Head pipes with flange, (2) mufflers, (2) tailpipes, (2) exhaust manifold packing, (4) tube clamps. If you need muffler bands see P/N MS-185

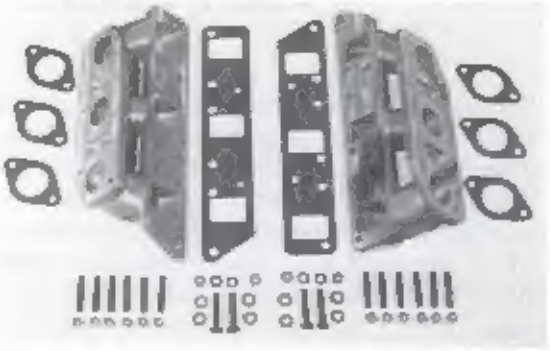
Order P/N DM-184

MUFFLER BANDS

These are direct replacements for the G M bands. They have a cadmidite finish to prevent rust

Order P/N MS-185

CORVAIR TO IDA-3 WEBER MANIFOLD

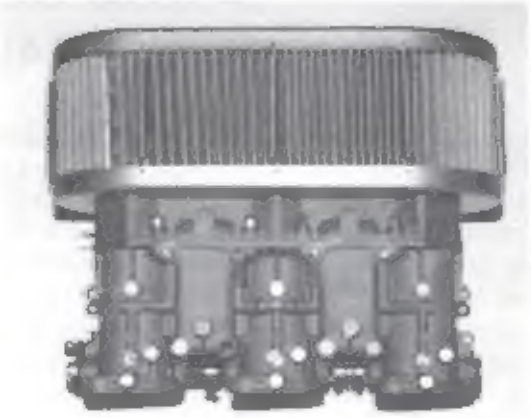


These quality cast aluminum manifolds are easily adapted to your corvair 140 H.P. heads. A vertical milling machine is required to do the machine work on your heads. Otto Parts allow 5 hours to do the machine work & 3 hours for port matching and any welding that may be required on some heads. The kit is as shown with manifolds, gaskets, mounting bolt s & carb studs with nuts. Complete machining instructions are included.

Order P/N WF-195

WEBER CARBS
IDA-3 40mm x 30mm Venturi

Why put IDA-3 Weber Carbs on a street 'vair? Most people agree they are great for performance at 20-30% horse power increase with no other changes. Here is what is not widely known about this setup for the street. The power at 2,300-2,500 RPM with this setup it is more of a proportional increase from 1,000 RPM up. Much better driveability. Fuel efficient, 20% improvement over stock carbs that are working well, not withstanding that most stock carbs around today are worn out. The customers we have talked with over the years who were using the IDA-3 carbs on the street were getting 28-32 MPG highway driving. I know some of you are saying I get almost that good with my stock carbs and I don't doubt that you are. The people we are referring to were not economy oriented but street fliers who got good mileage. If you are getting 28-30 MPG with stock carbs you would probably have no trouble getting 33-35 from the Weber setup. Don't forget that what you burn does not go into oil dilution to help wear out your engine. Detonation (pinging) while this is not a cure-all in this area the highly emulsified precision metered mixture which is evenly distributed to each cylinder is much less prone to detonate than what you have now. This also results in a cooler running engine.



Now do a little math to prove that your fuel savings will be $120-150 per 10,000 miles driven & then decide if you want to step up to the class of Weber carburation.

Order P/N WC-192

WEBER AIR FILTERS

Gold anodized aluminum frames & washable cloth type elements provide free flow filtering on or off road. You should never need to replace the elements in these filters, just wash and reoil the cloth.

Order P/N WF-193

OTTO PARTS

OTTO PARTS

9659 REMER STREET
SO. EL MONTE, CALIF. 91733
(213) 579-5875

- NOTE -
PLEASE USE THIS ORDER BLANK
CAM SELECTION FORM
& SHIPPING RATES
ON REVERSE SIDE

NAME 818

ADDRESS

CITY STATE ZIP

883 AG78

PLEASE REFER TO OUR SALES POLICY FOR TERMS AND SHIPPING CHARGES

QTY.	ORDER NO.	DESCRIPTION	UNIT PRICE	TOTAL

Sub-Total
6½% Sales Tax (Calif. Residents)
Freight
$3.00 Handling charge on orders less than $20.00
TOTAL
Amount Enclosed

CREDIT CARD PURCHASES

☐ Visa ☐ Master Card

Card Number

Expiration Date

Signature

To offset charge card cost. There will be a 4% minimum service charge on all charge card orders. No charge card orders under $50.00 accepted.

Send Cashiers Check or Money Order as payment

Payment by personal check will delay processing of your order. We wait until checks clear before we send your parts!

PLEASE FILL IN
INFORMATION BELOW ABOUT YOUR CORVAIR

Engine Year

Engine Model

Type Cylinder Heads

Bore Size

Type Carbs

Number of Carbs

Turbo Charged Yes ☐ No ☐

Other Modifications

THIS IS YOUR SHIPPING LABEL
— PLEASE FILL IN —

OTTO PARTS
9659 REMER STREET
SO. EL MONTE, CALIF. 91733

TO:
Name
Address
City State Zip
LBS
CA 9-33-040

CAM SELECTION FORM

Engine _____ Year _____ Model _____

Engine Displacement _____ Length of Stroke _____

Are Cylinder Heads from 140 H.P.? Yes ☐ No ☐

Compression Ratio _____

Type of Carburetors _____ Number of Venturis _____

Size of Venturis _____

Turbocharged? Yes ☐ No ☐ Type of Turbocharger _____

Boost Pressure if Turbocharged _____

Transmission: 3 Speed _____ 4 Speed _____ Automatic _____

Differential Gear Ratio _____ Total Car Weight _____

Cam now used: Make _____ Grind _____

Explain application of car and performance objectives:

_____

_____

_____

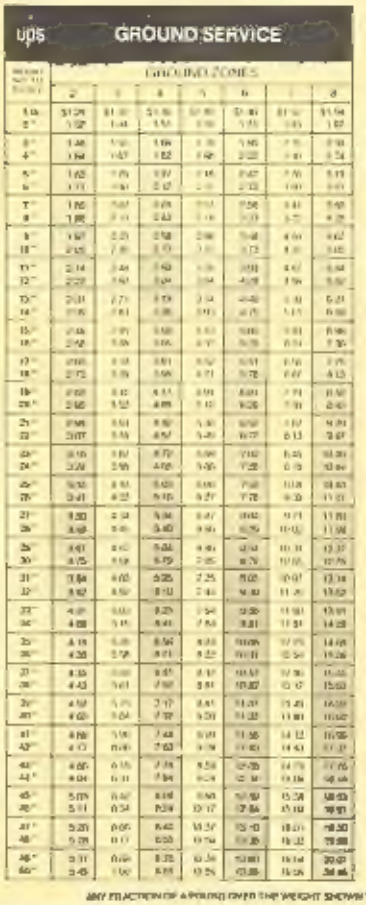
_____

SHIPPING CHART & RATES

OFFICIAL ZONE CHART

ZIP CODE PREFIXES	UPS ZONE
000-089	8
100-199	8
200-299	8
300-339	8
350-359	7
360-364	8
365-367	7
368	8
369-372	2
373-379	8
380-384	7
385	8
386-397	7
400-402	7
403-418	8
420-424	7
425-426	8
427	7
430-458	8
460-466	7
467-468	8
469	7
470	8
471-472	7
473	8
474-479	7
480-497	8
498-499	7
500-504	7
505	6
506-507	7
508-516	6
520-560	7
561	6
562-567	7
570-581	6
582	7
583-588	6
590-591	5
592-593	6
594	5
595	6
596-599	5
600-639	7
640-648	6
650-652	7
653	6
654-655	7
656-676	6
677	5
678	6
679	5
680-692	6
693	-
700-70	
710-711	6
712-737	7
738-739	6
739	5
740-775	6
776-777	7
778-789	6
790-791	5
792	6
793-794	5
795-796	6
797-799	5
800-838	5
840-863	4
864	3
865	4
870-871	5
873-874	4
875-884	5
890-891	3
893-898	4
900-935	2
936-939	3
940-949	4
950-953	3
954-961	4
970-974	5
975-976	4
977-986	5
988-994	5

ZONE RATES • • •



ANY FRACTION OF A POUND OVER THE WEIGHT SHOWN TAKES THE NEXT HIGHER RATE

OTTO PARTS

TRANSVAIR BUS PRODUCTS

These kits put a '65 or later Corvair engine/transmission/differential in a '68 or later VW Bus, Van or Camper. The smooth, reliable and economical Corvair powertrain transforms the bus, enabling it to easily keep up with traffic and loaf up mountain roads while delivering gas mileage comparable to the VW engine.

Bi-monthly engine overhauls are a thing of the past after the TRANSVAIR conversion. The Corvair engine has a much longer service life because it does not have to work as hard as the overstrained VW power unit. The strong Corvair gearbox and final drive allow the engine to loaf along at lower R.P.M.'s than the VW.

The kit includes all the little pieces and hardware that are needed to finish the conversion such as wiring and heater connectors. Installation of the kit is a snap. A floor jack and basic hand tools are required. An amateur mechanic can do the job in a weekends time.

SEND $1.00 FOR COMPLETE TRANSVAIR INFO PACKAGE

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Information you can trust

H.P. BOOKS

65 GM Corvair Chassis Shop Manual
How to Hotrod Corvair Engines
How to Keep Your Corvair Alive
How to Make Your Car Handle
Turbochargers
Rochester Carburetors

Order by Book Name

No Corvair owner should be without this book.

108 pages/288 photos/drawings/20 chapters. Tells how to get amazing performance from all 80 to 180 HP Corvairs. Covers cams, carbs, exhausts, heads, ignition, big bores, turbosuperchargers and simple VW/Corvair conversion details. Complete handling chapter.